Claims

1. Laminate of metal layers (1-3, 9) and plastic bonding layers (4-6) situated between the metal layers (1-3, 9), comprising two external metal layers (1, 3) extending substantially continuously and at least one internal metal layer (2, 9), characterized in that at least one of the internal metal layers (9) has at least one opening (10) and in that at the position of the opening (10) the other metal layers (1-3) and plastic bonding layers (4-6) are bonded together to the form of a packet of lower thickness.

2. Laminate according to Claim 1, in which at least one of the openings (10) is closed in the peripheral direction.

3. Laminate according to one of the preceding claims, in which the total surface area of the openings (10) is of the same order of magnitude as the surface area of the remainder (13) of the metal layer (9) provided with openings.

4. Laminate according to one of the preceding claims, in which the total surface area of the openings (10) is greater than the surface area of the remainder (13) of the metal layer (9) provided with openings.

5. Laminate according to one of the preceding claims, in which the metal layer (9) provided with openings (10) is situated between plastic bonding layers.

6. Laminate according to Claim 5, in which the metal layer (9) provided with openings (10) is bonded on either side to plastic bonding layers (5, 6), which plastic bonding layers (5, 6) continue without interruption at the position of the opening (10) and are bonded together at that point.

7. Laminate according to one of the preceding claims, in which at least one of the plastic bonding layers (5, 6) comprises a fibre reinforcement.

8. Laminate according to Claims 5 and 7, in which the metal layer (9) provided with openings (10) is bonded on one side to a fibre-reinforced plastic bonding layer and on the other side is bonded by means of a bonding layer (14) without fibre reinforcement to a further metal layer (2).

9. Laminate according to Claim 8, in which at the position of the opening (10) the fibre-reinforced plastic bonding layer (6) which is bonded to the metal layer (9) provided with an opening is bonded to the further metal layer (2).

10. Laminate according to one of the preceding claims, in which several internal metal layers are provided, at least two of which have at least one opening, and in which the openings of different metal layers at least partially cover each other.

11. Laminate according to Claim 10, in which the openings are aligned relative to each other and together form a stepped narrowing.

12. Laminate according to one of the preceding claims, in which the metal layer (9) provided with an opening forms a framework (13).

13. Laminate according to one of the preceding claims, in which at least one of the metal layers with at least one opening comprises metal layer parts connecting to each other.

14. Laminate according to one of the preceding claims, in which the thickness of a metal layer is less than 1.5 mm.

15. Laminate according to one of the preceding claims, in which the thickness of a metal layer lies between 0.1 and 0.8 mm.

16. Laminate according to one of the preceding claims, in which a plastic bonding layer comprises fibres of carbon, aramid or glass.

17. Laminate according to one of the preceding claims, in which the metal layers comprise Al, Cu, Mg, Ti, Sc and/or alloys of those metals.